APPENDIX G
EXAMPLE STREAMLINING DEMONSTRATIONS

Table G-1. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirements	Origin of Requirements
Emission/ Operating Limits	***Basis*** Streamlining may be feasible for facilities with solvent recovery systems demonstrating compliance based on a periodic liquid-liquid material balance (LLMB). [Facilities selecting one of the Subpart KK HAP emission rate compliance options or demonstrating compliance based on VOC inlet and outlet monitoring are not expected to be able to streamline because there are generally significant differences in averaging times between SIP-RACT and Subpart KK, (i.e., daily versus monthly). Facilities subject to Subpart FFF can not use an LLMB approach to demonstrate compliance.] The streamlined emission limit must be based on the most stringent control efficiency requirement applicable to each press or each group of presses with emissions controlled by the same solvent recovery system. This is expected to be Subpart KK, for subject facilities committing to the 95% overall control efficiency option. The 95% overall control efficiency requirement would apply to volatile matter, covering both VOCs and HAPs. Solvent recovery systems can be assumed to control VOC and organic HAP emissions to the same degree. Streamlining must also consider: any differences in the time period for each LLMB in SIP-RACT or NSR requirements relative to the monthly requirement in Subpart KK; and the applicability of any NSR requirements to one or more presses requiring greater than 95% control efficiency. ***Requirements*** 1. 95% overall recovery efficiency for volatile matter based on LLMBs for emission units controlled by the same solvent recovery system. 2. Development of monthly LLMBs unless SIP-RACT requires that LLMBs be conducted more frequently, covering a shorter time period. 3. There may be press-specific NSR emission limits that are more stringent than 95% overall control efficiency that would apply to a press and any other presses controlled by the same solvent recovery system.	1. Part 63, Subpart KK. 2. SIP-RACT, NSR and/or Part 63, Subpart KK. 3. NSR permit.
Other - Work Practice Standards	***Basis*** Each set of applicable requirements has similar language requiring use of good air pollution control practices. Subpart A and KK requirements are generally the most prescriptive in this area and can be considered equal to or more stringent than the other requirements for insuring proper operation. ***Requirements*** 4. Operate and maintain source, control equipment, and CMS consistent with good air pollution control practices. 5. Develop and implement SSM plan for source, control system, and CMS.	4. Part 63, Subpart A and Subpart KK. 5. Part 63, Subpart A and Subpart KK.

Table G-1. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirements	Origin of Requirements
Testing	***Basis*** LLMB compliance demonstrations generally require the conduct of LLMB performance tests covering consecutive, uniform time periods. All applicable requirements require the use of M24 data or certified formulation data for determining volatile content of applied and recovered materials. LLMB requirements in Subpart KK are generally the most prescriptive and can be considered equal to or more stringent than the other requirements for determining recovery efficiencies. ***Requirements*** 6. Conduct periodic LLMB performance tests for each uniform consecutive time periods. 7. Use M24 data or certified formulation data to determine volatile matter content for LLMB.	 6. SIP-RACT, NSR and/or Part 63, Subpart KK. 7. Part 63, Subpart KK.
Monitoring	***Basis*** Conducting LLMBs require monitoring of material usage and properties of these materials over each LLMB time period. The amount of solvent recovered must be accounted for over the same time period. The LLMB requirements in Subpart KK are the most prescriptive and can be considered equal to or more stringent than the other applicable requirements specifying material accounting procedures. ***Requirements*** 8. Cumulative amount of volatile matter consumed for each LLMB period. 9. Install, calibrate, maintain, and operate device certified to measure within ±2.0% of the cumulative amount of volatile matter recovered.	 8. Part 63, Subpart KK. 9. Part 63, Subpart KK.

Table G-1. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirements	Origin of Requirements
Recordkeeping	***Basis*** Each set of applicable requirements requires records be kept that document that operating and maintenance requirements are being followed and that demonstrate compliance with the applicable limitations. The Subpart KK procedures for maintaining records of compliance with the SSM plan are generally equal to or more stringent than similar requirements in the other applicable requirements. The Subpart KK requirements for recording the amount of volatile matter used and recovered each LLMB period and determining the overall control efficiency are more prescriptive and can be considered equal to or more stringent than the other requirements for documenting continuous compliance. SIP-RACT or NSR requirements may include more frequent recordkeeping in comparison to Subpart KK's requirements. ***Requirements*** 10. Amount of volatile matter used and recovered for each LLMB period. 11. Calculated overall effective organic volatile matter control efficiency for the LLMB period. 12. Written SSM plan and monthly records showing consistency with the SSM plan. 13. Real-time records showing inconsistencies with the SSM plan. 14. Records of applicability determinations.	 10. Part 63, Subpart KK. 11. Part 63, Subpart KK. 12. Part 63, Subpart A & Subpart KK. 13. Part 63, Subpart A & Subpart KK. 14. Part 63, Subpart A & Subpart KK.
Reporting	***Basis*** Reporting requirements under Subpart KK are the most prescriptive and can be considered as stringent or more stringent than the other reporting requirements. SIP-RACT or NSR requirements may include more frequent submittal of compliance reports in comparison to Subpart KK's semi-annual excess emissions report. ***Requirements*** 15. Periodic compliance summary report. 16. Initial notification of standard applicability. 17. Notification of compliance status. 18. Semiannual excess emissions report. 19. Semiannual SSM reports and inconsistency reports (as needed).	 15. SIP-RACT and/or NSR. 16. Part 63, Subpart A & Subpart KK. 17. Part 63, Subpart A & Subpart KK. 18. Part 63, Subpart A & Subpart KK. 19. Part 63, Subpart A & Subpart KK.

Table G-2. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Compliant Coating Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Emission/ Operating Limits	***Basis*** For facilities using compliant materials (no control devices) to meet applicable requirements, differences in averaging times and units of applicability in compliance terms will need to be considered in developing streamlined emission limitations. The differences may limit the feasibility of streamlining the emission limits. For example, SIP-RACT compliant coating requirements typically apply to VOCs in units of volume on a daily basis, while Subpart KK compliant coating limitations apply to organic HAPs in units of mass on a monthly basis. Variability in the properties of applied materials may preclude conversion of the different compliant coating requirements to a common basis, which is necessary in order to determine which of the limits are the more stringent. In streamlining comparisons States may consider mass-based alternative limit (0.5 lb VOC/lb solids) established by EPA as equivalent to RACT-CTG volume-based limits. In many instances, however, applied compliant coatings, formulated to meet either SIP-RACT or Subpart KK requirements, will easily meet the other. For example, water-based compliant materials are not likely to contain organic HAPs because of the limited solubility of organic HAPs in water; and radiation-cured materials will easily meet both compliant coating criteria. Opportunity exist for streamlining compliance demonstration requirements for monitoring, testing, recordkeeping, and reporting. ***Requirements*** 1. VOC limits on volume of VOC (i.e., 25% or less), water (i.e., 75% or more), and/or solids (i.e., 60% or more) in compliant coatings determined over the specified averaging time. 2. VOC limits on the mass of VOC per mass of ink solids (less than 1 to 1). 3. Organic HAP limits on mass of organic HAP relative to mass of ink supplied (4% or less) or mass of solids applied (20% or less) averaged over the month.	1. NSR and/or SIP-RACT. 2. Part 60, Subpart FFF (if applicable) 3. Part 63, Subpart KK.
Other - Work Practice Standards	***Basis*** Each set of applicable requirements has similar language requiring use of good air pollution control practices. ***Requirements*** 4. Operate and maintain source consistent with good air pollution control practices for material handling and housekeeping.	4. SIPs, Subpart A of Parts 60 and 63.

Table G-2. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Compliant Coating Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Testing	***Basis*** All applicable requirements require the use of M24 data or certified formulation data for determining volatile matter content of applied and recovered materials. Subpart KK also requires the use of M311 data or formulation data from certified product data sheets (CPDSs) for determining organic HAP content. The material testing requirements in Subpart KK are generally the most prescriptive and can be considered equal to or more stringent than the other requirements for determining VOC and HAP content. ***Requirements*** 5. Use M24 data, M311, and/ or certified formulation data to determine volatile matter and HAP content in applied materials.	5. Part 63, Subpart KK.
Monitoring	***Basis*** Each set of applicable requirements prescribes monitoring the usage of applied materials and their properties over the appropriate averaging time. For streamlining, a hybrid requirement could be developed to simplify the monitoring requirements while meeting the expectations of each individual applicable requirement. ***Requirements*** 6. Monitor applied material usage and VOC, water, exempt solvents, organic solids, and solids content over the appropriate averaging period. A different averaging period may be desirable for VOCs and organic HAPs.	6. SIP-RACT, NSR and/or Part 63, Subpart KK.
Recordkeeping	***Basis*** Each set of applicable requirements requires that records be kept that document material usage, the VOC and/or HAP content of these materials, and the necessary calculations for demonstrating compliance with the appropriate limits. Consistent with the approach to streamlining monitoring requirements, a hybrid requirement could be developed to simplify the recordkeeping requirements while meeting the expectations of each individual applicable requirement. ***Requirements*** 7. For each averaging period, the quantity of applied materials used and their VOC and organic HAP content, calculated in compliance terms.	7. SIP-RACT, NSR and/or Part 63, Subpart KK.

Table G-2. STREAMLINING EXAMPLE
Streamlined Requirements for Packaging Rotogravure or Wide-Web Flexographic with Compliant Coating Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Reporting	***Basis*** Reporting requirements under Subpart KK are the most prescriptive and can be considered as stringent or more stringent than the other reporting requirements. SIP-RACT or NSR requirements may include more frequent submittal of compliance reports in comparison to Subpart KK's semi-annual excess emissions report. ***Requirements*** 8. Periodic compliance summary report. 9. Initial notification of standard applicability. 10. Notification of compliance status. 11. Semiannual excess emissions report.	 8. SIP-RACT and/or NSR. 9. Part 63, Subpart A & Subpart KK. 10. Part 63, Subpart A & Subpart KK. 11. Part 63, Subpart A & Subpart KK.

Table G-3. STREAMLINING EXAMPLE
Streamlined Requirements for Publication Rotogravure with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Emission/ Operating Limits	***Basis*** Streamlining may be feasible for facilities with solvent recovery systems who are demonstrating compliance based on a periodic LLMB. [Facilities demonstrating compliance with Subpart KK based on VOC inlet and outlet monitoring are not expected to be able to streamline because there are generally significant differences in averaging times between SIP-RACT and Subpart KK, (i.e., daily versus monthly).] The streamlined emission limit must be based on the most stringent control efficiency requirement applicable to each press or each group of presses with emissions controlled by the same solvent recovery system. This is expected to be Subpart KK for facilities whose VOCs used are 80% or more organic HAP (based on a 90% SIP-RACT solvent recovery requirement. In this comparison, the percentage of organic HAP from Subpart KK varies with the SIP-RACT VOC control efficiency requirement). With VOC solvent contents of less than 80% organic HAP, the SIP-RACT 90% requirement is more stringent. Streamlining must also consider: differences in the time period of each LLMB in SIP-RACT or NSR requirements in comparison to the monthly requirement in Subpart KK; and the applicability of any NSR requirements to one or more presses requiring greater than 92% control efficiency. ***Requirements*** 1. For facilities using 80% or greater organic HAP volatile matter, 92% overall recovery efficiency for volatile matter based on LLMBs for emission units controlled by the same solvent recovery system. (Control efficiency calculations based on Subpart KK Equation 1.) 2. For facilities using 80% or less organic HAP volatile matter, 90% overall control efficiency for volatile matter based on LLMBs for emission units controlled by the same solvent recovery system. (The organic HAP criteria in this example must be recalculated for a different SIP-RACT requirement.) 3. Development of monthly LLMBs unless SIP-RACT requires that LLMBs be conducted more frequently, covering a shorter time period. 4. There may be press-specific NSR emission limits that are more stringent than 92% overall control efficiency that would apply to a press and any other presses controlled by the same solvent recovery system.	1. Part 63, Subpart KK. 2. SIP-RACT. 3. SIP-RACT, NSR, and/or Part 63, Subpart KK. 4. NSR permit.

Table G-3. STREAMLINING EXAMPLE
Streamlined Requirements for Publication Rotogravure with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Other - Work Practice Standards	***Basis*** Each set of applicable requirements generally has similar language requiring use of good air pollution control practices. Subpart A and KK requirements are generally the most prescriptive in this area and can be considered equal to or more stringent than the other requirements for insuring proper operation. ***Requirements*** 5. Operate and maintain source, control equipment, and continuous monitoring systems (CMS) consistent with good air pollution control practices. 6. Develop and implement SSM plan for source and control system.	 5. Part 63, Subpart A and Subpart KK. 6. Part 63, Subpart A and Subpart KK.
Testing	***Basis*** LLMB approaches generally require the conduct of LLMB performance tests covering consecutive uniform time periods. All applicable requirements require the use of M24 data or certified formulation data for determining volatile content of applied and recovered materials. The LLMB requirements in Subpart KK are generally the most prescriptive and can be considered equal to or more stringent than the other requirements for determining recovery efficiencies. ***Requirements*** 7. Conduct periodic LLMB performance tests for each uniform consecutive time periods. 8. Use M24 data or certified formulation data to determine volatile matter content for LLMB.	 7. SIP-RACT, NSR and/or Part 63, Subpart KK. 8. Part 63, Subpart KK.
Monitoring	***Basis*** LLMBs require monitoring of material usage and properties of these materials over each LLMB time period. The amount of solvent recovered must be accounted for over the same time period. The LLMB requirements in Subpart KK are the most prescriptive and can be considered equal to or more stringent than the other requirements for specifying material accounting procedures. ***Requirements*** 9. Cumulative amount of volatile matter consumed for each LLMB period. 10. Install, calibrate, maintain, and operate device certified to measure within ±2.0% of the cumulative amount of volatile matter recovered.	 9. Part 63, Subpart KK. 10. Part 63, Subpart KK.

Table G-3. STREAMLINING EXAMPLE
Streamlined Requirements for Publication Rotogravure with Solvent Recovery Control Strategy

Applicable Requirement	Streamlined Requirement	Origin of Requirement
Recordkeeping	***Basis*** Each set of applicable requirements requires records be kept that document operating and maintenance requirements are being followed and that demonstrate compliance with the applicable limitations. The Subpart KK procedures for maintaining records of compliance with the SSM plan are generally equal to or more stringent than similar requirements in the other applicable requirements. The Subpart KK requirements for recording the amount of volatile matter used and recovered each LLMB period and determining the overall control efficiency are more prescriptive and are generally equal to or more stringent than the other requirements for documenting continuous compliance. ***Requirements*** 11. Amount of volatile matter used and recovered for each LLMB period. 12. Calculated overall effective organic volatile matter control efficiency for the LLMB period. 13. Written SSM plan and monthly records showing consistency with the SSM plan. 14. Real-time records showing inconsistency with the SSM plan. 15. Records of applicability determinations.	 11. Part 63, Subpart KK. 12. Part 63, Subpart KK. 13. Part 63, Subpart A & Subpart KK. 14. Part 63, Subpart A & Subpart KK. 15. Part 63, Subpart A & Subpart KK.
Reporting	***Basis*** Reporting requirements under Subpart KK are the most prescriptive and can be considered as stringent or more stringent than the other reporting requirements. SIP-RACT or NSR requirements my include more frequent submittal of compliance reports in comparison to Subpart KK's semi-annual excess emissions report. ***Requirements*** 16. Periodic compliance summary report. 17. Initial notification of standard applicability. 18. Notification of compliance status. 19. Semiannual excess emissions report. 20. Semiannual SSM reports and inconsistency reports (as needed).	 16. SIP-RACT and/or NSR. 17. Part 63, Subpart A & Subpart KK. 18. Part 63, Subpart A & Subpart KK. 19. Part 63, Subpart A & Subpart KK. 20. Part 63, Subpart A & Subpart KK.